

Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services

STATEMENT OF BASIS

Texas Petroleum Investment Company
Avery Island Facility Wide Unit (FWU) & Compressor Station No. 1
Delcambre, Iberia Parish, Louisiana
Agency Interest Number: 8073
Activity Number: PER20080001
Proposed Permit Number: 1260-00069-V3

I. APPLICANT

Company:

Texas Petroleum Investment Company
P. O. Box 196
Delcambre, Louisiana 70528-0196

Facility:

Avery Island FWU & Compressor Station No. 1
5.5 Mi SE of Delcambre
Delcambre, Iberia Parish, Louisiana
Approximate Latitude/Longitude Coordinates of Facility Front Gate (Degrees
Minutes Seconds.Hundredths): 29 53 40.06 / 91 55 7.04

II. FACILITY AND CURRENT PERMIT STATUS

Texas Petroleum Investment Company (TPIC) owns and operates the Avery Island Field Wide Unit (FWU) & Compressor Station No. 1 near Delcambre, Iberia Parish, under Part 70 Operating Permit No. 1260-00069-V2 issued on May 29, 2007.

The Avery Island Field Wide Unit (FWU) & Compressor Station No. 1 is an oil and gas production facility which separates natural gas, oil, and produced water from nearby wellstreams. The wellstreams flow through separators. The gas stream is compressed, dried in a glycol dehydrator, and directed to the sales pipeline. The glycol dehydrator is equipped with a flash separator and condenser. The noncondensibles are routed to the dehydrator flare for combustion. Flash separator off gas is routed to the reboiler burner for combustion. The oil stream from the separators is directed to the oil tanks and trucked off as needed. The water stream from the separators is directed to another facility for injection via an electric transfer pump.

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The Avery Island FWU & Compressor Station No. 1 is a designated Part 70 source. Only one Part 70 permit has been issued to the facility.

Permit No.	Unit or Source	Date Issued
1260-00069-V2	Avery Island FWU & Compressor Station No. 1	5-29-2007

The facility submitted a timely application for its initial Part 70 permit. This facility does not currently operate under any state permits.

III. PROPOSED PROJECT/PERMIT INFORMATION

Application

A permit application dated June 19, 2008 was submitted requesting a Part 70 operating permit renewal and modification for the Avery Island FWU & Compressor Station No. 1. Additional information dated January 19, 2009, February 18, 2009, February 19, 2009, February 20, 2009, and March 2, 2009 was also submitted.

Proposed Permit

Permit 1260-00069-V3 will be the renewal/modification of Part 70 operating permit 1260-00069-V2 for the Avery Island FWU & Compressor Station No. 1.

In this Part 70 Operating Permit, Texas Petroleum Investment Company (TPIC) requested the following changes to its current Part 70 Operating Permit:

1. To renew its Part 70 Operating Permit.
2. To add formaldehyde emissions for the Compressor Engines (Source ID Nos. 11 and 12. All other emissions for these two emission sources will remain the same as currently permitted.
3. To change Source ID No. 10 (Glycol Reboiler – Stills Column), Source ID No. 21 (Glycol Reboiler – Condenser Vent), and Source ID No. 22 (Glycol Reboiler – Flash Separator Vent) to reflect that the stills column emissions are reported at the condenser vent and that the flash separator vent gas emissions are recycled as process fuel.
4. To update pump emissions from Source ID No. 8 (Chemical Pump), Source ID No. 18 (Sump Pump – Wilden M-2), Source ID No. 19 (Sump Pump – Wilden M-8), and Source ID No. 20 (Sump Pump – Wilden M-4).
5. To add Source ID No. 15 (Compressor Relief Vent) emissions. Emissions are routed through this vent during compressor shutdowns, compressor blowdowns, and cylinder purges.
6. To remove Source ID No. 5 (1000 BBL Saltwater Storage Tank) and Source ID No. 18 (Sump Pump – Wilden M-2) from the permit.

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Permitted Air Emissions

Estimated emissions in tons per year are as follows:

Pollutant	Before	After	Change
PM ₁₀	0.68	0.67	- 0.01
SO ₂	0.04	0.04	0.00
NO _x	241.91	241.71	- 0.20
CO	60.24	60.07	- 0.17
VOC *	88.58	89.99	+ 1.41

*VOC LAC 33:III.Chapter 51 Toxic Air Pollutants (TAPs):			
Pollutant	Before	After	Change
Benzene	0.14	0.13	- 0.01
Ethyl Benzene	0.01	0.00	- 0.01
Formaldehyde	-	1.35	+ 1.35
n-Hexane	0.87	0.88	+ 0.01
Toluene	0.08	0.07	- 0.01
Xylene (mixed isomers)	0.08	0.06	- 0.02
Total	1.18	2.49	+ 1.31

Other VOC (TPY):	87.50
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IV REGULATORY ANALYSIS

The applicability of the appropriate regulations is straightforward and provided in the Specific Requirements section of the proposed permit. Similarly, the Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards are also provided in the Specific Requirements section of the proposed permit.

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Applicability and Exemptions of Selected Subject Items

ID No.	Requirement	Note
EQT001, EQT002	40 CFR 60 Subpart IIII Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	Does Not Apply. Engines are stationary spark ignition reciprocating internal combustion engines, not stationary compression ignition internal combustion engines. [40 CFR 60.4200(a)]
	40 CFR 60 Subpart JJJJ Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	Does Not Apply. Engines were manufactured, modified, or constructed before June 12, 2006. [40 CFR 60.4230(a)(4), (5)]
	40 CFR 63 Subpart ZZZZ National Emission Standards for Hazardous Air Pollutants For Stationary Reciprocating Internal Combustion Engines	Does Not Apply. Engines are existing spark ignition 4-stroke rich burn stationary reciprocating internal combustion engines located at an area source. [40 CFR 63.6590(b)(3)]
EQT010	40 CFR 63 Subpart HH National Emission Standards for Hazardous Air Pollutants (NESHAP) From Oil and Natural Gas Production Facilities	Exempt from Control Requirements. Controlled emissions of benzene from the glycol dehydration unit are less than 0.90 megagram (0.99 tons) per year. Recordkeeping requirements of 40 CFR 63.774(d)(1) apply. [40 CFR 63.764(e)(1)(ii)]
	LAC 33:III.2116 Glycol Dehydrators	VOC, Total \geq 85% reduction using a control device. Demonstrate percent reduction using the methods found in LAC 33:III.2116.D. [LAC 33:III.2116.B.2] Glycol dehydrators using a flare as a control device shall ensure destruction of emissions to the flare stack by maintaining the heat content of the flare gas above 300 BTU/scf and by documenting daily visual observations of the continuous presence of a flame. [LAC 33:III.2116.B.3]

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Nonattainment New Source Review (NNSR) / Prevention of Significant Deterioration (PSD)

The Avery Island FWU & Compressor Station No. 1 is located in Iberia Parish which is in attainment for all regulated pollutants. As such, Non-Attainment New Source Review (NNSR) regulations do not apply.

Since the Avery Island FWU & Compressor Station No. 1 is an oil and gas production facility which emits less than 250 tons per year of any air pollutant regulated under PSD regulations (LAC 33:III.509), the facility does not meet the definition of *major stationary source* as defined in LAC 33:III.509.B. As such, PSD regulations do not apply.

Streamlined Equipment Leak Monitoring Program

The Avery Island FWU & Compressor Station No. 1 does not operate under a streamlined leak monitoring program.

MACT Requirements

The facility was a major source of Toxic Air Pollutants (TAPs) at the time the LAC 33:III.Chapter 51 was promulgated. Upon routing the still column vent to the condenser and then to the flare as Maximum Achievable Control Technology (MACT), the station became a minor source of TAPs subject to LAC 33:III.905, 5105.A.1, 5105.A.3, 5105.A.4, and 5113.

Air Quality Analysis

Emissions associated with the proposed modifications were reviewed by the Air Quality Assessment Division to ensure compliance with the NAAQS and AAS. LDEQ did not require the applicant to model emissions.

General Condition XVII Activities

The facility will comply with the applicable General Condition XVII Activities emissions as required by the operating permit rule. However, General Condition XVII Activities are not subject to testing, monitoring, reporting or recordkeeping requirements. For a list of approved General Condition XVII Activities, refer to the Section VIII – General Condition XVII Activities of the proposed permit.

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Insignificant Activities

All Insignificant Activities are authorized under LAC 33:III.501.B.5. For a list of approved Insignificant Activities, refer to the Section IX – Insignificant Activities of the proposed permit.

V. PERMIT SHIELD

The facility did not apply for a permit shield.

VI. PERIODIC MONITORING

Periodic monitoring requirements for applicable subject items are found in the Specific Requirements section of the permit.

VII. GLOSSARY

Carbon Monoxide (CO) – A colorless, odorless gas, which is an oxide of carbon.

Maximum Achievable Control Technology (MACT) – The maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

Hydrogen Sulfide (H₂S) – A colorless inflammable gas having the characteristic odor of rotten eggs, and found in many mineral springs. It is produced by the reaction of acids on metallic sulfides, and is an important chemical reagent.

New Source Review (NSR) – A preconstruction review and permitting program applicable to new or modified major stationary sources of air pollutants regulated under the Clean Air Act (CAA). NSR is required by Parts C (“Prevention of Significant Deterioration of Air Quality”) and D (“Nonattainment New Source Review”).

Nitrogen Oxides (NO_x) – Compounds whose molecules consist of nitrogen and oxygen.

Organic Compound – Any compound of carbon and another element. Examples: Methane (CH₄), Ethane (C₂H₆), Carbon Disulfide (CS₂)

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Part 70 Operating Permit – Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507. Major sources include, but are not limited to, sources which have the potential to emit: ≥ 10 tons per year of any toxic air pollutant; ≥ 25 tons of total toxic air pollutants; and ≥ 100 tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year for sources in non-attainment parishes).

PM₁₀ – Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

Potential to Emit (PTE) – The maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.

Prevention of Significant Deterioration (PSD) – A New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

Sulfur Dioxide (SO₂) – An oxide of sulfur.

Sulfuric Acid (H₂SO₄) – A highly corrosive, dense oily liquid. It is a regulated toxic air pollutant under LAC 33:III.Chapter 51.

Title V Permit – See Part 70 Operating Permit.

Volatile Organic Compound (VOC) – Any organic compound, which participates in atmospheric photochemical reactions; that is, any organic compound other than those, which the administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.